

THE RED-HEADED ORCHELIMUM AND SOME OTHER NEW
JERSEY ORTHOPTERA.

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It seems quite certain in considering Redtenbacher's description of *Xiphidium agile*, DeGeer, which he considers the same as *Orchelimum vulgare*, Harris, that he took for his type of the species what is generally identified as *O. vulgare*. His figure (80) is also a typical *vulgare*. He says the elytra not at all or scarcely exceeding the hind femora, very little shorter than or equalling the wings. All the femora unarmed. These are characters of *O. vulgare*, Harris.

DeGeer's figure, however, shows a rather slender insect, in which the wings are longer than the elytra, and he says the wing-covers are transparent. Such an insect, with the hind femora spined on the under side, occurs in New Jersey, and has been identified by Prof. Lawrence Bruner as *Orchelimum agile*, DeGeer. I am indebted to Prof. J. B. Smith for specimens of this species, which agree very well with DeGeer's description and figure. They show no dark median streak down the face. In the Pine Barrens of New Jersey there is another *Orchelimum* much resembling *vulgare*, but which may easily be told from it at a distance by its very different song. Upon a nearer approach its most noticeable feature is its very red face, often the whole head being of a blood-red colour. It appears as if the insect had eaten of ripe cranberries and got its head stained with the fruit, for the colour is the same. The Red-headed *Orchelimum* appears to be undescribed, and may be more particularly characterized as follows :

Orchelimum erythrocephalum, sp. nov.—A medium-sized robust species, with the general colour green ; there are occasional light brown examples. The face, if not wholly red, has usually a red band down the middle, which expands laterally. This area is not definite, and not chocolate brown as in some other species. There is a dark brown dorsal band upon the prothorax and head. The elytra and wings usually exceed the hind femora about 4 mm, and the wings are usually a little longer than the elytra. The hind femora are rarely without erect spines, but are armed with from one to several spines on the under side. The spines are on the outer carina, and are not always of the same number on both legs. The ovipositor is curved, but less so than in *Orchelimum vulgare*.

Measurements: Male—Length of body, 20 mm.; of pronotum, 5 mm.; of tegmina, 20 to 24 mm.; of hind femora, 16 mm. Female—Length of body, 21 mm.; of pronotum, 6 mm.; of tegmina, 21 mm.; of hind femora, 17 mm.; of ovipositor, 9 mm.

A number of males and one female have been collected at Lakehurst, N. J., where it is far more common than *vulgare*. I have also collected the species at Tom's River, N. J. One female, from Ocean Co., N. J., was received from Prof. J. B. Smith.

In September, 1903, three male specimens of a large *Conocephalus* were collected at Lakehurst, N. J. I was first attracted to the spot in the abandoned cranberry bog by hearing the insect stridulate. The song was a slow *zip-zip-zip*, repeated many times, and much resembling the stridulation of *Conocephalus exiliscanorus*, of the salt meadows. However, when the first specimen was captured its resemblance to *C. robustus* was noted, and those to whom the specimens have been shown have suggested that it was *robustus*. The song, however, is very different, the fastigium is shorter, and bordered with a narrow black line on the lower surface extending from the tip to base, or nearly so. This species, which seems to be new, I take pleasure in naming after Mr. Andrew N. Caudell, to whom I am indebted for making comparisons with specimens in the National Museum.

Conocephalus Caudellianus, sp. nov.—A robust species, either green or brown, the brown specimens having the tegmina flecked with black. Fastigium obtuse, its sides with a faint yellow line, beneath which there is a black line extending from the apex to the base of the antennæ, or nearly so. The lower basal tooth blunt but distinct. Anterior and middle femora unarmed beneath; posterior femora armed beneath on both carinæ with numerous spines.

Measurements: Male—Length of body, 33 mm.; of fastigium beyond the eyes, 2.5 mm.; of pronotum, 8 mm.; of tegmina, 44 mm.; of hind femora, 24 mm.

Another interesting insect from Lakehurst, N. J., is what Mr. Caudell assures me is *Conocephalus Nebrascensis*, Bruner, a species usually reported from the upper Mississippi Valley and further west. Eleven specimens were collected in various cranberry bogs on the 20th of September, 1903, and many others were heard.